Code-Mixing Instruction And Vocabulary Improvement Among First Year Junior High School In Indonesia

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Abstract

This study investigated the effectiveness of code-mixing instruction among First Year Junior High School at Lab-school UNAI Bandung. Thus the study intended to answer the following Question "Is code-mixing effective in improving the vocabulary ofthe participants?" To answer the question, the researcher did three major activities namely Pre-test, implementation of Code mixing Instruction and Post-test. The participants were instructed to do vocabulary test of completion and paraphrase in pre-test and post-test. Data calculated showed that pre-test has a mean of 18.52, maximum score 27, and the minimum score is 7, after the treatment, the mean of the Post-test is 22.96, and the maximum score is 30 and the minimum score is 13. The effectiveness of code-mixing instruction in improving vocabulary learning can be prove by the Gain Index score and the
mean is 4.42. From Wilcoxon test showed there was a significant difference before giving the treatment and after giving the treatment. The result showed that F observed, F critical (0,59). The t-test showed a significant difference also between pre-test and post-test. It is significant at 0,000
Keywords : Code-mixing, vocabulary, improvement

I. INTRODUCTION

English plays an important role in all domains, namely education, business, political relation, judiciary and industry. English is a passport to social mobility, higher education, and for better job opportunities. So English is one of the influential factors in international communication.. Without having good vocabulary there will be break down communication. Because some breaks in communication are caused by vocabulary mistakes. Therefore students in which English is their foreign language, knowing vocabulary is a must for them.

Vocabulary as one of the vital elements of language is considered to be the main focus of learning foreign language as there is a belief said that learning a foreign language is similar with learning its vocabulary. Indah Nur Hidayani, 2004, stated that a research on the teaching and learning a foreign language, especially vocabulary, it is very limited and little has been written on the teaching and learning of foreign language vocabulary, because there is a sense said that learning a foreign is basically a matter of learning the vocabulary of that language. Quirk and Stein (1990) said that one word is a key to a language and it is therefore not surprising at all, that word can mean "speech" or "language" in a number of languages.

Learning a new vocabulary may create many difficulties to the language learners. For example, students are having difficulties in understanding and memorizing vocabulary, that is why it is hard form them to construct sentences. That is the reason why some foreign language teachers use the mother tongue during the teaching and learning vocabulary.

Baker & Cummins J (2000) mentioned that mother tongue has various meanings (1) the language learned from the mother, (2) the first language learned. (3) the mother tongue of the area or country, (4) the stronger (or dominant) language of any time of life, (5) the language use most by a person, (6) the language toward with the person has the more positive attitude and affection.

Mother tongue can emphasize and

contribute the meaning of new vocabulary to the learners, and it would be more meaningful if the teacher gives another example of the usage of the vocabulary in another form and sentences. Therefore, it can be concluded that mother tongue can aid the comprehension on the meaning of a vocabulary.

There is language phenomenon that might share the same concern either the interference of the mother tongue in the target language, for example, code mixing. Code mixing involves the use of mother tongue in a target language utterances.

Richards, Plat and Plat (1992) described code switching as "a change by a speaker (or writer) from one language or language variety to another one" Wile code mixing is "a mixing of two codes or language, without a change of topic.

Baker and Jones (1998) described Code-Mixing is sometimes used to describe the mixing of two languages at the word level (i.e. one word in a sentence is in a different language). However, in term of a means to teach vocabulary, code mixing is never used as a technique by the foreign language teachers except by Mehmet Celik, an English lecture and teacher trainer at Hacettepe University in Turkey. Basedon Celik's findings (2002) it was found that code mixing can be an efficient and effective method to introduce new vocabulary to the language learners.

Azar Hosseini Fatemi & Ghasem Barani (2014) study on the impact of teachers' code switching(C-S) on the vocabulary learning of Iranian university EFL learners. There were 60 intermediate university EFL learners were selected randomly and were allocated to a code-switching condition versus an English-only condition classroom. Findings of the study provided us with ample evidence that teacher's code switching can result in more fruitful communications in the process of teaching and learning.

Based on the facts that were presented above, the researcher was interested to apply this code-mixing method to the First Year Junior High School of UNAI Lab School Bandung in order to know whether code-mixing Instruction can improve students' vocabulary as adult learner.

Statement of the Problem

In this study the researcher wants to find out the effectiveness and efficiency of code mixing in improving the vocabulary of the First Year Junior High School.

Thus the study intend to answer the following questions: "*Is code –mixing effective in improving the vocabulary of the participants*?"

II. Methodology

The study used the experimental design. The presentation of this design was described in the following formula :

T1 x T2
T1= the pre-test
X = treatment
T2 = the post-test

Participants

The participants were 21 students who were studying in the formal school in grade seven o Junior High School, at Lab School UNAI Bandung. Their ages were around 10-13 years old.

Data Gathering

In gathering data, the researcher used the following procedures:

A. Pilot –test
A pilot test on instrument was done at SMP Negri 1 Parongpong. The reason for choosing this class was because this had almost similar characteristics with the class to be used at Lab-School Bandung. The purpose of this pilot-test is to measure the validity and the reliability of the instrument

B. Pre-test
Pre-test were administered to 21 students who did took the test. The researcher recorded the participants' vocabulary achievement in English lesson before treatment. The pre-test consisted of 30 items that was designed in the

form of multiple choice in order to avoid subjectivity in answering the questions. The 30 items test was constructed into two types of testing vocabulary, completion and paraphrase

Treatment (the Actual Research)

Procedures in the classroom used code-mixing instruction in the speaking class as follows:

1. The teacher gave the students an instruction to listen a listening passage and then suggested the students to write down important information
2. The teacher read the passage
3. The teacher and the students discussed the information that they have listened
4. The teacher gave the students exercise which involved the use of the newly introduced vocabulary
5. The students practiced to match the vocabulary with its synonyms
6. The students practiced using the newly introduced vocabulary by filling the blanks in the sentence
7. The students practiced using the newly introduced vocabulary by constructing their own sentences
8. The students reported their work orally
9. The teacher and the students made a conclusion about the lesson.

The code-mixing instruction is implemented during the vocabulary class. The following were steips in implementing code-mixing instruction that the researched used based on the model proposed by Mehmed Celik (2003).

1. Listening Lask

   The researcher read and gave a text to the participants that contained vocabulary items L1, after that researcher and participants discussed the information of the text that they have listened without using L1 9mother tongue) in the text (they have to translate L1 to L2)

2. Oral Task

   The researchers asked the participants to mae a summary of the text in parits without using L1 in the text. Further the participants reported their work orally by constructing their own sentences.. the researcher's had to observe that most of the

   students used the target lexical item (L2)

3. Writing Task
   a. The participants answered the question based on the text.
      - The participant's have to write down what they have discussed about and make a conclusion about the text.
      - The participants write sentences with translate the L1 to L2
   b. The participants using the newly introduced vocabulary by filling the blanks in the sentences
   c. The participants practiced to matching the vocabulary with their meaning . Match the words in Column A with their meaning in Column B.

D. Post-test

Post-test were administered to 21 participants that were tested with the same text as the pre test, and the participants' improvement scores were recorded for data analyzing.

E. Data Analysis Procedures

To calculate the data, the researcher used statistic procedures to find (1) mean of the pre-test and post-test, (2) standard deviation, (3) standard normal cumulative distribution, (4) calculating the Lilliefors, (5) determining L maximum. These tests were used to prove the effectiveness of code mixing in improving students' vocabulary achievement.

There are three basic characteristics of test validity, reliability and practicality as stated by Hatch and Farhady,(1982)

1. Validity of each item test

The result of validity test is interpreted using criteria as follow:

0.002 -0.20	Very poor
0.21-0.40	Poor
0.41-0.60	Satisfactory
0.61-0.80	Good
0.81-1.00	Excellent

a. Reliability

The result of reliability test is interpreted using criteria as follow:

0.00-0.20	Unreliable
0.21-0.40	Low
0.41-0.60	Moderate
0.61-0.80	High
0.81-1.00	Very high

b. Practicality

Arikunto (1993) a test is considered to have a high practicality if the test is practical in term of: a. the test is easy to be administered

i. The test is easy to score
ii. The test completed with a clear instruction

2. Technique for Analyzing the Data
3. There are several conditions that need to be fulfilled in analyzing the result of the study. Those are: (1) the normality of data distribution; an (2) the homogeneity of the data. In the data analysis, Lilliefors static was employed since the sample of the study was less than 30 respondents (,30). While to test the homogeneity of the data, the F_{ratio} was applied. (4) Calculating the Wilcoxon test of the students' score. And (5) calculating for the Gain Index- it is use to calculate the improvement of the students' vocabulary achievement in terms of their gain.

Null Hypothesis and Alternative Hypothesis.

The Null Hypothesis (H_0)

H_0 - There is no significant difference between Pretest and Post-test

Alternative Hypothesis (H_a)

H_a - There is a significant difference between Pre-test and Post-test

III. PRESENTATION, ANALYSIS OF DATA AND DISCUSSION

Data gathered is analyzed in this session to come to an answer of the statement of the problem stated at the introduction. So we begin with:

1. Test Reliability

To examine the reliability of the test for the instrument, the researcher did it by using split half reliability and the result was *x= 0.9992* and based on the criteria , then it was classified into the very high category as a result, and it could be used as the research instrument. The table below showed the reliability analysis scale (alpha) and statistic scale item mean, item variances and inter-item correlation of the instrument. It was based on the following criteria:

x > 0.9	Excellent
x > 0.8	Good
x >0.7	Acceptable
x >0.5	Poor
x < 0.5	Unacceptable

It can be seen from the table above that the instrument were excellent as it was proven from the $x = 0.9992$. It can be seen from the table of reliability analysis as follows 9(n the next page)
Reliability Analysis - Scale (Alpha)

	Scale Mean if Item Deleted	Scale Variance If Item Deleted	Correcte d Item Total Correlati on	Alpha if Item Deleted
Q1	146.4348	235772.9179	.9966	.9992
Q2	148.4348	242258.2957	.9989	.9992
Q3	148.0435	240983.1092	.9993	.9991
Q4	148.9565	243966.3092	.9966	.9992
Q5	146.0000	234375.4222	.9992	.9993
Q6	147.3913	238864.9990	.9982	.9991
Q7	147.4348	239004.8734	.9985	.9991
Q8	148.0000	240840.8444	.9977	.9991
Q9	147.3478	238722.3208	.9994	.9991
Q10	147.5652	239429.7623	.9976	.9991
Q11	147.8261	240276.5469	.9978	.9991
Q12	147.5652	239426.9179	.9977	.9991
Q13	148.7391	243254.2415	.9978	.9992
Q14	148.1739	241408.0580	.9967	.9992
Q15	147.3913	232865.5768	.9988	.9991
Q16	147.6957	239851.7275	.9996	.9991
Q17	147.0435	237738.7092	.9972	.9991
Q18	148.4783	242401.8995	.9966	.9992
Q19	148.1304	241266.9159	.9991	.9992
Q20	147.2609	238443.3971	.9964	.9991
Q21	148.3478	241972.4097	.9983	.9992
Q22	146.8696	237177.4048	.9970	.9992
Q23	148.2609	241691.4860	.9973	.9992
Q24	148.0435	240981.9981	.9996	.9991
Q25	147.0435	239799.0647	.9998	.9991
Q26	146.7826	233896.2961	.9976	.9992
Q27	147.7391	239992.8193	.9990	.9991
Q28	147.8261	240275.8802	.9976	.9991
Q29	149.3913	242390.4657	.9975	.9993
Q30	147.7391	239994.1638	.9988	.9991

Reliabity Coefficients
N of Cases =46.0 N of items = 30 Alpha =.9992

2. Data Gathering

In gathering data, the researcher used the following procedures:

- Pre-test

The researcher administered the pre-test to 21 students. The pre-test consisted of 30 items that was designed in the form of multiple choice. The 30 items were constructed in two types of testing vocabulary; completion and paraphrase the researcher recorded participants' vocabulary achievement before treatment

- Treatment

The researcher gave the implementation of code-mixing instruction following the procedures stated in the methodology for 11 weeks .

- Post-test

The participants were tested with the same test as the pre-test after the treatment . The participants' improvement score were recorded for data analyzing - Interpreting the score: The researcher used Wilcoxon test to find the significance between pre-test and post-test

3. Data Analyzing Procedures

In analyzing whether there was a difference and improvement in the code-mixing instruction, the researcher did the computation of the data. The computation of the data was (1) to find the mean of pre-test and post-test 92) to find standard deviation o pre-test and post-test. (3) to conclude of the data normal distribution data (4) to find homogeneity of variance (5) to determine index gain test (6) to find Wilcoxon test.

N0	Pre- test		Post-test		Gain Index		
	Raw Score	% Score	Raw Score	% Score	Raw Score	% Score	Category
1	7	23	24	80	17	56.7	High
2	10	33	13	43	3	10	Unreliable
3	12	40	24	80	12	40	High
4	12	40	26	87	14	46.7	High
5	13	43	13	43	0	0	Unreliable
6	14	47	15	50	1	3.3	Unreliable
7	15	50	17	57	2	6.7	Unreliable
8	17	57	23	77	3	10	Low
9	17	57	23	77	6	20	Moderate
10	18	60	21	70	4	13	Low
11	20	67	23	77	5	16.7	Moderate
12	20	67	21	70	1	3.3	Unreliable
13	20	67	21	70	1	3.3	Unreliable
14	21	70	27	90	6	20	High
15	22	73	23	77	1	3.3	Unreliable
16	22	73	30	10	8	26.7	Very high

17	25	83	29	97	4	13	High
18	25	83	25	83	0	0	Unreliable
19	25	83	28	93	0	0	Unreliable
20	27	90	27	90	3	10	High
21	27	90	29	97	2	6.7	High
Sum	389	1297	482	1517	93	309.98	
Mean	18.52	61. 7	23	72	4.4	14.8	
SD	5.76	24. 7	5	24	19.4	17.4	
Variances	33.17	610	26	569	376	302.1	
Maximum	27	90	30	97	17	56.7	
Minimum	7	23	13	43	0	0	

a

. Normal Distribution

By having the scores from the pre-test, post test and gain test, the scores were calculated to see whether the scores were normally distributed or not. The participants were less than 30, it meant that the participants were small in size. Therefore, the Lilliefors test was employed to calculate the normal distribution of the data (Sudiana, 1992). The following is the hypothesis for normal distribution testing.

Normal Distribution Calculation Using Liliefors
Pre-test Data

Xi	fi	fcum	Zi	Fzi	Szi	FziSzi	Fziszi
7	1	1	**-2**	0.02	0.04	-0.02	0.02
10	1	2	**-1.48**	0.06	0.09	-0.02	0.02
12	2	4	**-1.13**	0.12	0.19	-0.06	0.06
13	1	5	**-0.95**	0.17	0.23	-0.07	0.07
14	1	6	**-0.78**	0.21	0.28	-0.07	0.07
15	1	7	**-061**	0.27	0.33	-0.06	0.06
17	2	9	**-0.26**	0.39	0.42	-0.03	0.03
18	1	10	**-0.09**	0.46	0.47	-0.01	0.01
20	3	13	**0.25**	0.59	0.61	-0.02	0.02
21	1	14	**0.43**	0.66	0.66	0	0
22	2	16	**0.6**	0.72	0.76	-0.04	0.03
25	3	19	**1.12**	0.86	0.9	-0.04	0.03
27	2	21	**1.47**	0.92	1	-0.07	0.07
	21					Fmax 0.07	

Post-test data

Xi	Fi	fcum	Zi	fzi	Szi	FziSzi	Fziszi
13	2	2	-1.96	0.02	0.09	-0.07	0.07
15	1	3	-1.57	0.05	0.14	-0.08	0.08
17	1	4	-1.17	0.12	0.19	-0.06	0.06
21	3	7	-0.38	0.35	0.33	0.01	0.01
23	4	11	-9.89	0.84	0.52	0.31	0.31
24	2	13	0.2	0.57	0.61	-0.03	0.03
25	1	14	0.4	0.65	0.66	-0.01	0.01
26	1	15	0.6	0.72	0.71	0.01	0.01
27	2	17	0.8	0.79	0.8	-0.02	0.02
28	1	18	0.99	0.83	0.85	-0.01	0.01
29	2	20	1.19	0.89	0.95	-0.06	0.06
30	1	21	1.39	0.91	1	-0.08	0.08
	21					Fmax	0.32

Normal distribution Calculation Using Lilliefors

Scores	n	Alpha level	$L_{observed}$	$L_{critical}$
Pre-test	21	0.05	0.0708	0.190
Posttest	21	0.05	0.3175	0.190

The interpretation of the table $L_{observed}$ of the pretest score was less than $L_{critical}$. For the pre-test score is 0.07, which is lower than the $L_{critical}$ (Lo, Lc). It means that the null hypothesis was accepted; the scores of the pretest were normally distributed. While the $L_{observed}$ of the post-test was more than $L_{critical}$. It means that the null hypothesis was rejected since the $L_{observed}$ for the post-test is 0.32, which is higher than $L_{critical}$ (Lo 0.32.Lc 0.90. It means that the posttest score was not normally distributed.

b. The Homogeneity of Variance

To know whether the scores from the pre-test and post-test had equal variance, F_{ratio} was employed. The result can be seen in the next table

Homogeneity of Variance Calculation Using F_{ratio}

Scores	Df	Alpha level	F observed	F critical

Pretestposttest	20	0.05	1.29	1.96

The table above explains that F observed is less than F critical. It means the null hypothesis was accepted. In other words, both pre-test and post-test scores were homogeneous

c. Hypothesis testing Using the Wilcoxon Test If one of the data of the pre-test was not normal and homogeneous, the Wilcoxon test was applied. It was also used to investigate whether or not the mean of the post-test was different from pre-test and the result of this text showed the significance of the difference.

The Result of Wilcoxon Test

No	Post test	Pre test	A-B	Ranking	
	Raw score (A)	Raw score (B)		Peringkat A-B	positive
1	13	13	0	2	2
2	25	25	0	2	2
3	27	27	0	2	2
4	15	14	1	5.5	5.5
5	21	20	1	5.5	5.5
6	21	20	1	5.5	5.5
7	23	22	1	5.5	5.5
8	17	15	2	8.5	8.5
9	29	27	2	8.5	8.5
10	13	10	3	11	11
11	23	20	3	11	11
12	28	25	3	11	11
13	21	17	4	13.5	13.5
14	29	25	4	13.5	13.5
15	23	18	5	15	15
16	23	17	6	16.5	16.5
17	27	21	6	16.5	16.5
18	30	22	7	18	18
19	24	12	12	19	19
20	26	12	14	20	20
21	24	7	17	21	21
Sum	482	389	93	231	231
Mean	29.96	18.52	4.43	11	11
SD	5.06	5.76	6.06	9.2	9.2
Variance	25.6	33.17	36.72	84.64	84.64
Maximum	30	7	17	21	21
Minimum	13		0	2	2

The result can be seen in the table 6

The calculation using wilcoxon test

criteria	Alpha level	N	W
F Observed	-	21	0
F Critical	0.05	21	59

Based on the table above, it can be said that Observed is O (zero), which is far below the C. which has the value of 59. It means that the students' vocabulary achievement before and after the treatment, the difference of the students' vocabulary achievement was very significant. In other findings, see table 7 (a,b) below the pre-test and post-test show a significant difference from the t-test. It was significant at (0.000). therefore there is a significant difference before giving the treatment and after the treatment.

One sample statistics

	N	Mean	Std. Deviation	Std. Error Mean
Pre-test	21	18.5238	5.7673	1.2585
Post-test	21	22.9524	5.0247	1.0965

Table a

	Test Value = 0					
	T	df	Sig. (2tailed)	Mean Difference	95% Confidence Interval of the Difference	
					Lower	Upper
Pre-test	14.719	20	.000	18.5238	15.8986	21.1491
Posttest	20.933	20	.000	20.6652	20.6652	25.2396

Table b

Conclusion

1. Based on above conclusion, it can be seen that code-mixing instruction can improve the students' vocabulary achievement. It can be seen from the result of pre-test, post-test and gain index. Pre test has mean of 18.52. Posttest is 22.95 and gain index has mean of 4,38. Standard deviation of prest was 5.76, post test was 5.06 and gain index was 19.39
2. Most of the learners felt that code-mixing instruction helped them to remember each word when they filled the blanks and listen to a text or a passage
3. Code –mixing instruction is effective to enhance vocabulary learning and teaching through using gain index and Wilcoxon test. It can be said that there was a significant difference between pre-test and post-test in the participants' vocabulary achievement who suing codemixing instruction
4. When code-mixing instruction was implemented in the classroom, it was found that advanced learners enjoyed the instruction while some learners need to concentrate and pay more attention in offer to follow the instruction.

Recommendation

From the result of this study the researched recommended the following:

1. In applying the code-mixing instruction, the teacher has to select the new words and give varieties of sample. The listening passage exercises should be suitable with the new words and concerned about time allocation for the implementation of the code-mixing instruction.
2. For further study on code-mixing instruction it is better to used two groups such as the control group and the experimental group in order to give a more vivid description about the influence of the study. It is recommended to conduct the study tin a longer period of time or at least to one grading period.

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